PB-240 399

SWINGING BRIDGE RESERVOIR, SULLIVAN COUNTY, NEW YORK

Pacific Northwest Environmental Research Laboratory

Prepared for:

National Environmental Research Center, Corvallis
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16. ABSTRACT

Annual total phosphorus and total nitrogen loadings to the lake were estimated and subdivded according to either point or non-point source origin. An assessment of the lake's trophic condition and limiting nutrient is also provided. All data collected by the U.S.E.P.A. National Eutrophication Survey during the one year study of the lake and its tributaries are included in the report.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
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II

REPORT
ON
SWINGING BRIDGE RESERVOIR
SULLIVAN COUNTY
NEW YORK

EPA REGION II

WORKING PAPER No. 172

WITH THE COOPERATION OF THE

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AND THE

NEW YORK NATIONAL GUARD

DECEMBER, 1974

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FOREWORD

The National Eutrophication Survey was initiated in 1972 in response to an Administration commitment to investigate the nationwide threat of accelerated eutrophication to fresh water lakes and reservoirs.

OBJECTIVES

The Survey was designed to develop, in conjunction with state environmental agencies, information on nutrient sources, concentrations, and impact on selected freshwater lakes as a basis for formulating comprehensive and coordinated national, regional, and state management practices relating to point-source discharge reduction and non-point source pollution abatement in lake watersheds.

ANALYTIC APPROACH

The mathematical and statistical procedures selected for the Survey's eutrophication analysis are based on related concepts that:

a. A generalized representation or model relating sources, concentrations, and impacts can be constructed.

b. By applying measurements of relevant parameters associated with lake degradation, the generalized model can be transformed into an operational representation of a lake, its drainage basin, and related nutrients.

c. With such a transformation, an assessment of the potential for eutrophication control can be made.

LAKE ANALYSIS

In this report, the first stage of evaluation of lake and watershed data collected from the study lake and its drainage basin is documented. The report is formatted to provide state environmental agencies with specific information for basin planning [§303(e)], water quality criteria/standards review [§303(c)], clean lakes [§314(a,b)], and water quality monitoring [§106 and §305(b)] activities mandated by the Federal Water Pollution Control Act Amendments of 1972.

Beyond the single lake analysis, broader based correlations between nutrient concentrations (and loading) and trophic condition are being made to advance the rationale and data base for refinement of nutrient water quality criteria for the Nation's fresh water lakes. Likewise, multivariate evaluations for the relationships between land use, nutrient export, and trophic condition, by lake class or use, are being developed to assist in the formulation of planning guidelines and policies by EPA and to augment plans implementation by the states.

ACKNOWLEDGMENT

The staff of the National Eutrophication Survey (Office of Research & Development, U. S. Environmental Protection Agency) expresses sincere appreciation to the New York Department of Environmental Conservation for professional involvement and to the New York National Guard for conducting the tributary sampling phase of the Survey.

Henry L. Diamond, Commissioner of the New York Department of Environmental Conservation, and Leo J. Hetling, Director, and Italo G. Carcich, Senior Sanitary Engineer, Environmental Quality Research, Department of Environmental Conservation, provided invaluable lake documentation and counsel during the Survey.

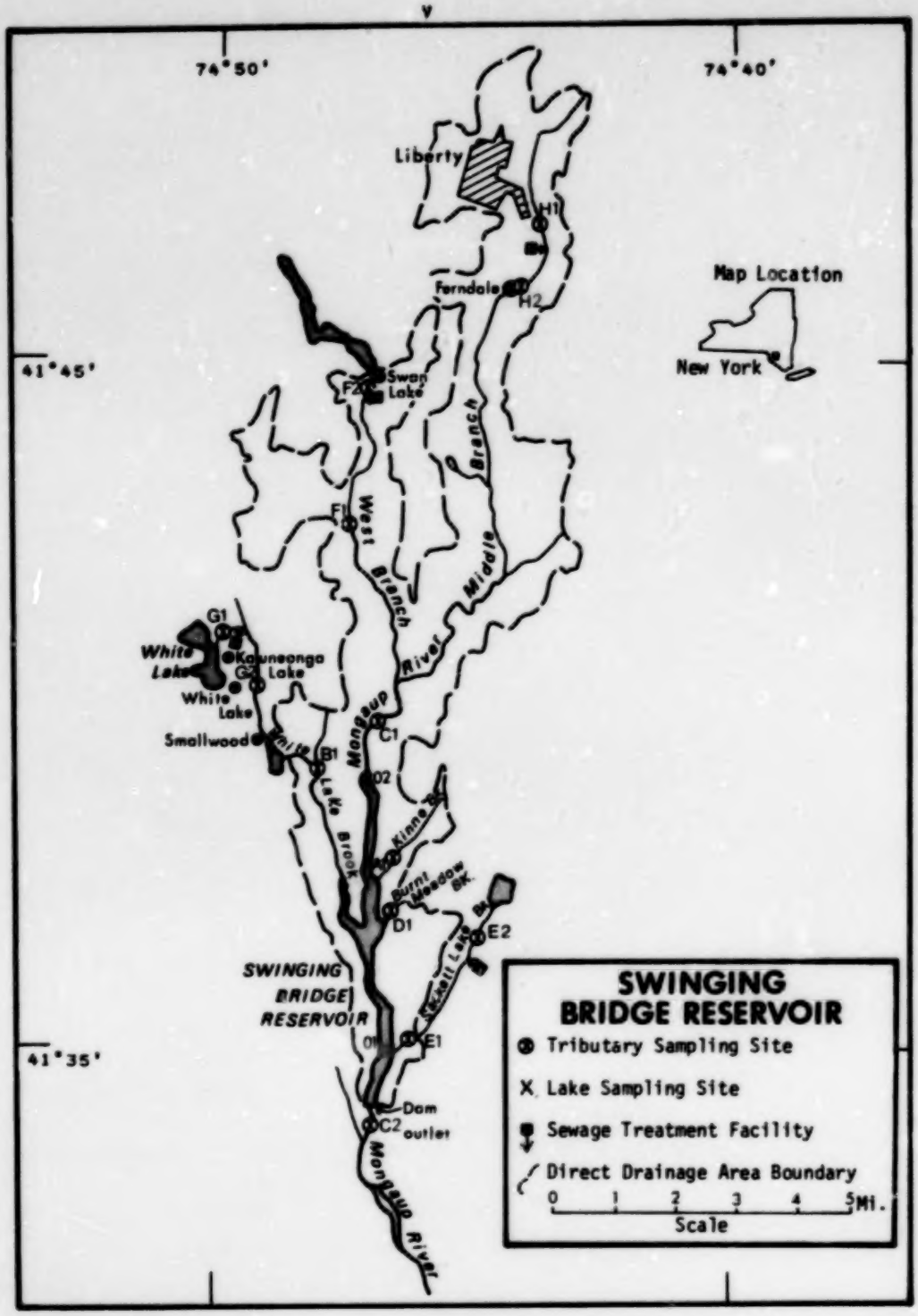
Major General John C. Baker, the Adjutant General of New York, and Project Officer Lieutenant Colonel Fred Peters, who directed the volunteer efforts of the New York National Guardsmen, are also gratefully acknowledged for their assistance to the Survey.

NATIONAL EUTROPHICATION SURVEY

STUDY LAKES

STATE OF NEW YORK

LAKE NAME	COUNTY
Allegheny Reservoir	Cattaraugas, NY; McLean, Warren, PA
Black	St. Lawrence
Canadaigua	Ontario
Cannonsville	Delaware
Carry Falls	St. Lawrence
Cassadaga	Chautauqua
Cayuga	Seneca, Tompkins
Champlain	Clinton, Essex, NY; Addison, Chittenden, Franklin, VT
Chautauqua	Chautauqua
Conesus	Livingston
Cross	Cayuga, Onondaga
Goodyear	Otsego
Huntington	Sullivan
Keuka	Ontario
Long	Hamilton
Lower St. Regis	Franklin
Otter	Cayuga
Owasco	Cayuga
Raquette Pond	Franklin
Round	Saratoga
Sacandaga Res.	Fulton, Saratoga
Saratoga	Saratoga
Schroon	Essex, Warren
Seneca	Seneca, Schyler, Yates
Swan	Sullivan
Swinging Bridge Res.	Sullivan


74°50'
74°40'
41°45'
41°35'
Liberty
H1
Ferndale
H2
Map Location
New York
Swan Lake
F2
F1
West Branch
Middle Branch
River
G1
White Lake
Kauneonga Lake
G2
White Lake
Smallwood
Mongaup
B1
C1
D2
Lake Brook
Kinne Br.
Burnt Meadow Br.
D1
E2
Rockall Lake
SWINGING BRIDGE RESERVOIR
E1
Dam outlet
C2
Mongaup River
SWINGING BRIDGE RESERVOIR
Tributary Sampling Site
Lake Sampling Site
Sewage Treatment Facility
Direct Drainage Area Boundary
0 1 2 3 4 5 Mi.
Scale

SWINGING BRIDGE RESERVOIR

STORET NO. 3637

I. CONCLUSIONS

A. Trophic Condition:

Survey data indicate Swinging Bridge Reservoir is eutrophic. Of the 26 New York lakes sampled in the fall when essentially all were well-mixed, 19 had less mean total phosphorus, 22 had less mean dissolved phosphorus, and 18 had less mean inorganic nitrogen. For all New York data, 24 lakes had less mean chlorophyll a, and 22 had greater Secchi disc transparency.

Depression of dissolved oxygen with depth was observed in July, 1972. Survey limnologists noted an algal bloom during the July sampling.

B. Rate-Limiting Nutrient:

A significant change in phosphorus concentration occurred in the algal assay sample from the time of collection to the time the assay was begun, and the results are not indicative of conditions in the Reservoir at the time the sample was collected.

The lake data indicate phosphorus limitation in May and nitrogen limitation in July. October lake data indicate the north end of the lake was nitrogen limited and the south end was phosphorus limited.

C. Nutrient Controllability:

1. Point sources--During the sampling year, Swinging Bridge Reservoir received a total phosphorus load at a rate about five times that proposed by Vollenweider (in press) as dangerous; i.e., a eutrophic rate (see page 14). Of that load, it is estimated that four wastewater treatment plants (Liberty, Swan Lake, Kauneonga, and Sackett Lake) contributed 80%.

The State-wide ban on phosphates in detergents may be expected to reduce phosphorus loading from wastewater treatment plants approximately 50% (after existing supplies of phosphate detergent are exhausted). The ban on phosphate detergent, together with 90% removal of the remaining phosphorus at the four treatment plants, would lower the phosphorus loading rate to 14.9 lbs/acre/yr or 1.68 $g/m^2/yr$ which is still above Vollenweider's eutrophic rate (1.40 $g/m^2/yr$). With 100% P-removal at the four plants, the loading rate would be reduced to 12.4 lbs/acre/yr or about 1.39 $g/m^2/yr$, which closely approximates the eutrophic rate.

It is concluded that a high degree of phosphorus removal at the four point sources would result in an improvement in the trophic condition of Swinging Bridge Reservoir.

2. Non-point sources (see page 14)--Except for Kinne Brook, the phosphorus exports of the Reservoir tributaries were quite similar to the exports of New York streams studied elsewhere.

However, the phosphorus export of Kinne Brook is more than three times greater than the mean of the exports of all of the other streams and may have resulted from unknown and unmeasured point sources.

In all, it is estimated that non-point sources contributed about 19% of the total phosphorus load reaching the Reservoir during the sampling year.

II. LAKE AND DRAINAGE BASIN CHARACTERISTICS

A. Lake Morphometry†:

1. Surface area: 858 acres.
2. Mean depth: 44 feet.
3. Maximum depth: >83 feet.
4. Volume: 37,800 acre/feet.
5. Mean hydrualic retention time: 92 days.

B. Tributary and Outlet:
(See Appendix A for flow data)

1. Tributaries -

Name	Drainage area*	Mean flow*
Kinne Brook	13.4 mi^2	18.8 cfs
White Lake Brook	13.8 mi^2	19.4 cfs
Mongaup River	76.5 mi^2	107.4 cfs
Burnt Meadow Brook	2.8 mi^2	3.9 cfs
Sackett Lake Brook	3.9 mi^2	5.4 cfs
Minor tributaries & immediate drainage -	36.0 mi^2	52.4 cfs
Totals	146.4 mi^2	207.3 cfs

2. Outlet -

Mongaup River	147.7 mi^2**	207.3 cfs

C. Precipitation***:

1. Year of sampling: 46.6 inches.
2. Mean annual: 40.4 inches.

---

† Greeson and Robison, 1970.
* Drainage areas are accurate within ±5%, except for small basins (±10%); mean daily flows are accurate within ±5 to 25%; and normalized mean monthly flows are accurate within ±15%.
** Includes area of lake.
*** See Working Paper No. 1, "Survey Methods".

III. LAKE WATER QUALITY SUMMARY

Swinging Bridge Reservoir was sampled three times during the open-water season of 1972 by means of a pontoon-equipped Huey helicopter. Each time, samples for physical and chemical parameters were collected from two stations on the lake and from a number of depths at each station (see map, page v). During each visit a single depth-integrated (15 feet or near bottom to surface) sample was composited from the stations for phytoplankton identification and enumeration; and during the last visit, a single five-gallon depth-integrated sample was composited for algal assays. Also each time, a depth-integrated sample was collected from each of the stations for chlorophyll a analysis. The maximum depths sampled were 83 feet at station 1 and 13 feet at station 2.

The results obtained are presented in full in Appendix B, and the data for the fall sampling period, when the lake essentially was well-mixed, are summarized below. Note, however, the Secchi disc summary is based on all values.

For differences in the various parameters at the other sampling times, refer to Appendix B.

A. Physical and chemical characteristics:

Parameter	Minimum	Mean	Median	Maximum
		FALL VALUES (10/11/72)		
Temperature (Cent.)	10.4	16.0	17.2	17.3
Dissolved oxygen (mg/l)	5.6	7.0	5.8	10.7
Conductivity (μmhos)	73	77	75	98
pH (units)	6.5	6.8	6.5	7.6
Alkalinity (mg/l)	10	10	10	10
Total P (mg/l)	0.025	0.051	0.031	0.131
Dissolved P (mg/l)	0.015	0.026	0.016	0.085
NO_2 + NO_3 (mg/l)	0.280	0.313	0.280	0.500
Ammonia (mg/l)	0.060	0.188	0.240	0.250
		ALL VALUES		
Secchi disc (inches)	24	51	46	96

B. Biological characteristics:

1. Phytoplankton -

Sampling Date	Dominant Genera	Number per ml
05/21/72	1. Flagellates	1,555
	2. Cryptomonas	886
	3. Fragilaria	470
	4. Dinobryon	434
	5. Navicula	289
	Other genera	1,050
	Total	4,684
07/22/72	1. Anabaena	8,795
	2. Fragilaria	843
	3. Nitzschia	452
	4. Flagellates	271
	5. Synedra	151
	Other genera	361
	Total	10,873
10/11/72	1. Anabaena	1,340
	2. Melosira	392
	3. Chroococcus	226
	4. Flagellates	181
	5. Fragilaria	151
	Other genera	1,023
	Total	3,313

2. Chlorophyll a -
(Because of instrumentation problems during the 1972 sampling, the following values may be in error by plus or minus 20 percent.)

Sampling Date	Station Number	Chlorophyll a (µg/l)
05/21/72	01	28.4
	02	11.7
07/22/72	01	83.9
	02	16.4
10/11/72	01	8.7
	02	22.9

C. Limiting Nutrient Study:

Between the time the algal assay was collected and the assay was begun, nutrient levels—especially phosphorus—had changed significantly and the assay results are not indicative of conditions in the Reservoir at the time the sample was collected.

The lake data indicate phosphorus limitation in May (N/P ratios = 13/1 and 21/1 at stations 1 and 2, respectively), nitrogen limitation in July (N/P = 12/1 and 6/1 at stations 1 and 2, respectively), and in October the mean N/P ratio at station 1 was 34/1 while at station 2 it was 11/1. The two stations are approximately 5 miles apart. Station 2 at the north end of the lake receives the phosphorus loading of the Mongaup River, and phosphorus would not be in short supply there (a nitrogen-limited condition). The hydraulic flow through time of the Reservoir is calculated to be 92 days

and, by the time the water reaches station 1 at the south end of the lake, phosphorus is likely to be depleted to some degree (a phosphorus limited condition).

IV. NUTRIENT LOADINGS
(See Appendix C for data)

For the determination of nutrient loadings, the New York National Guard collected monthly near-surface grab samples from each of the tributary sites indicated on the map (page v), except for the high runoff months of April and May when two samples were collected. Sampling was begun in November, 1972, and was completed in October, 1972.

Through an interagency agreement, stream flow estimates for the year of sampling and a "normalized" or average year were provided by the New York District Office of the U.S. Geological Survey for the tributary sites nearest the lake.

In this report, nutrient loads for sampled tributaries were calculated using mean annual concentrations and mean annual flows. Nutrient loadings for unsampled "minor tributaries and immediate drainage" ("ZZ" of U.S.G.S.) were estimated by using the nutrient loads, in lbs/mi^2/year, at station D-1 and multiplying by the ZZ area in mi^2.

The operator of the Liberty wastewater treatment plant provided monthly effluent samples and corresponding flow data. However, the operator of the Kauneonga plant did not provide enough samples, the operator of the Sackett Lake plant did not provide enough flow data, and the operator of the Swan Lake plant did not participate in the Survey; the nutrient loads from these facilities were estimated at 2.5 lbs P and 7.5 lbs N/capita/year.

Also, two Thompson Township waste treatment plants (Melody Lake SD and Kiamesha SD) initially were assumed to impact the Reservoir but do not. The operators of these plants provided monthly samples and flow data. The resulting data are included in Appendix C of this report for the record only.

A. Waste Sources:

1. Known municipal† -

Name	Pop. Served	Treatment	Mean Flow (mgd)	Receiving Water
Kauneonga Lake SD	4,000	trickling filter	0.400*	White Lake Brook
Sackett Lake SD	5,000	trickling filter	0.500*	Sackett Lake Brook
Liberty	4,293	trickling filter	1.280	Mongaup River, Middle Branch
Swan Lake SD	4,000	trickling filter	0.400*	Mongaup River, West Branch

2. Known industrial - None

† Anonymous, 1972.
* Estimated at 100 gal/capita/day.

B. Annual Total Phosphorus Loading - Average Year:

1. Inputs -

Source	lbs P/ yr	% of total
a. Tributaries (non-point load) -		
Kinne Brook	2,410	4.4
White Lake Brook	550	1.0
Mongaup River	5,260	9.7
Burnt Meadow Brook	140	0.3
Sackett Lake Brook	300	0.6
b. Minor tributaries & immediate drainage (non-point load) -	1,800	3.4
c. Known municipal-		
Liberty	10,960	20.2
Swan Lake SD	10,000	18.5
Kauneonga Lake SD	10,000	18.5
Sackett Lake SD	12,500	23.1
d. Septic tanks* -	60	0.1
e. Known industrial - None	-	-
f. Direct precipitation** -	130	0.2
Total	54,110	100.0

2. Outputs -

Lake outlet - Mongaup River 22,450

3. Net annual P accumulation - 31,660 pounds

* Estimate based on 100 shoreline dwellings; see Working Paper No. 1.
** See Working Paper No. 1.

C. Annual Total Nitrogen Loading - Average Year:

1. Inputs -

Source	lbs N/ yr	% of total
a. Tributaries (non-point load) -		
Kinne Brook	56,630	7.3
White Lake Brook	28,470	3.7
Mongaup River	356,750	46.1
Burnt Meadow Brook	11,200	1.4
Sackett Lake Brook	11,210	1.4
b. Minor tributaries & immediate drainage (non-point load) -	144,000	18.9
c. Known municipal -		
Liberty	5[illegible]	7.1
Swan Lake SD	[illegible]	3.9
Kauneonga Lake SD	[illegible]	3.9
Sackett Lake SD	[illegible],500	4.9
d. Septic tanks* -	2,350	0.3
e. Known industrial - None	-	-
f. Direct precipitation** -	8,270	1.1
Total	770,890	100.0

2. Outputs -

Lake outlet - Mongaup River 615,100

3. Net annual N accumulation - 157,790 pounds

* Estimate based on 100 shoreline dwellings; see Working Paper No. 1.
** See Working Paper No. 1.

D. Mean Annual Non-point Nutrient Export by Subdrainage Area:

Tributary	lbs P/mi^2/yr	lbs N/mi^2/yr
Kinne Brook	180	4,233
White Lake Brook	40	2,063
Mongaup River	69	4,663
Burnt Meadow Brook	50	4,000
Sackett Lake Brook	77	2,874

E. Yearly Loading Rates:

In the following table, the existing phosphorus loading rates are compared to those proposed by Vollenweider (in press). Essentially, his "dangerous" rate is the rate at which the receiving waters would become eutrophic or remain eutrophic; his "permissible" rate is that which would result in the receiving water remaining oligotrophic or becoming oligotrophic if morphometry permitted. A mesotrophic rate would be considered one between "dangerous" and "permissible".

	Total Phosphorus		Total Nitrogen	
Units	Total	Accumulated	Total	Accumulated
lbs/acre/yr	63.1	36.9	898.5	183.9
grams/m^2/yr	7.07	4.14	100.7	20.6

Vollenweider loading rates for phosphorus (g/m^2/yr) for Swinging Bridge Reservoir based on mean depth and mean hydraulic retention time:

"Dangerous" (eutrophic rate)	1.40
"Permissible" (oligotrophic rate)	0.70

V. LITERATURE REVIEWED

Anonymous, 1972. Municipal S.T.W. inventory. NY State Dept. of Env. Cons., Albany.

Greeson, Phillip E., and F. Luman Robison, 1970. Characteristics of New York lakes. Part 1 - Gazetter of lakes, ponds, and reservoirs. Bull. 68, U.S. Dept. Int. and NY State Dept. of Env. Cons., Albany.

Vollenweider, Richard A. (in press). Input-output models. Schweiz. A. Hydrol.

VII. APPENDICES

APPENDIX A

TRIBUTARY FLOW DATA

TRIBUTARY FLOW INFORMATION FOR NEW YORK 11/26/74

LAKE CODE 3637 SWINGING BRIDGE RESERVOIR

TOTAL DRAINAGE AREA OF LAKE 147.66

TRIBUTARY	SUB-DRAINAGE AREA	NORMALIZED FLOWS JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
3637A1	13.40	20.80	22.10	41.10	45.00	25.00	10.50	6.47	7.67	5.13	7.96	15.00	19.30	18.83
3637B1	13.80	21.40	22.70	42.40	46.40	25.70	10.80	6.66	8.10	5.28	8.20	15.40	19.90	19.38
3637C1	76.90	119.00	126.00	235.00	257.00	142.00	59.80	36.98	44.90	29.20	45.40	85.50	110.00	107.40
3637C2	147.66	217.41	235.30	301.51	372.18	271.09	183.41	139.57	135.99	106.47	137.78	161.94	228.14	207.35
3637D1	2.76	4.28	4.54	8.46	9.26	5.14	2.16	1.33	1.62	1.05	1.64	3.08	3.98	3.87
3637E1	3.87	6.00	4.36	11.90	13.00	7.21	3.03	1.87	2.27	1.48	2.30	4.33	5.58	5.44
3637Z2	37.33	57.90	61.40	115.00	125.00	69.60	29.20	18.00	21.90	14.30	22.20	41.70	53.90	52.43

SUMMARY

TOTAL DRAINAGE AREA OF LAKE = 147.66
SUM OF SUB-DRAINAGE AREAS = 147.66

TOTAL FLOW IN = 2491.83
TOTAL FLOW OUT = 2490.79

MEAN MONTHLY FLOWS AND DAILY FLOWS

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
3637A1	11	72	58.00	4	11.00				
	12	72	49.00	2	35.00				
	1	73	26.00	5	37.00				
	2	73	21.00	4	74.00				
	3	73	25.00	4	18.00				
	4	73	54.00	8	64.00	21	16.00		
	5	73	49.00	5	16.00	20	73.00		
	6	73	62.50	3	34.20				
	7	73	15.50	8	11.80				
	8	73	69.50	5	84.00				
	9	73	1.60	2	1.80				
	10	73	1.51	7	1.55				
3637B1	11	72	52.00	4	10.00				
	12	72	44.00	2	32.00				
	1	73	23.00	5	43.00				
	2	73	19.00	4	67.00				
	3	73	22.00	3	11.00				
	4	73	49.00	8	58.00	21	15.00		
	5	73	44.00	5	14.00	20	66.00		
	6	73	32.40	3	19.80				
	7	73	16.20	2	43.60				
	8	73	36.30	5	43.80				
	9	73	6.70	2	7.56				
	10	73	6.32	7	6.51				

TRIBUTARY FLOW INFORMATION FOR NEW YORK 11/26/74

LAKE CODE 3637 SWINGING BRIDGE RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
3637C1	11	72	388.00	4	76.00				
	12	72	329.00	2	238.00				
	1	73	171.00	5	288.00				
	2	73	142.00	4	1000.00				
	3	73	166.00	3	119.00				
	4	73	360.00	8	423.00	21	99.00		
	5	73	326.00	5	95.00	20	439.00		
	6	73	205.00	3	118.00				
	7	73	93.00	8	68.00				
	8	73	234.00	5	290.00				
	9	73	42.70	2	50.00				
	10	73	48.10	7	41.20				
3637C2	11	72	587.00	4	38.00				
	12	72	495.00	2	492.00				
	1	73	341.00	5	492.00	6	492.00		
	2	73	381.00	4	532.00				
	3	73	250.00	4	30.00				
	4	73	666.00	8	1130.00	21	446.00		
	5	73	487.00	5	30.00	20	1420.00		
	6	73	522.00	3	479.00				
	7	73	414.00	8	575.00				
	8	73	417.00	5	528.00				
	9	73	146.00	2	16.00				
	10	73	182.00	7	0.0				
3637D1	11	72	11.60	4	2.28				
	12	72	9.84	2	7.14				
	1	73	5.14	5	7.70				
	2	73	4.27	4	14.90				
	3	73	5.00	4	3.20				
	4	73	10.80	8	12.40	21	3.10		
	5	73	9.80	5	3.00	20	14.00		
	6	73	7.25	3	4.79				
	7	73	3.97	8	3.06				
	8	73	7.78	5	8.57				
	9	73	2.07	2	2.34				
	10	73	1.96	7	2.02				
3637E1	11	72	16.70	4	3.27				
	12	72	14.10	2	10.00				
	1	73	7.37	5	13.00				
	2	73	6.11	4	21.00				
	3	73	7.70	4	3.00				
	4	73	15.50	8	29.00	21	7.40		
	5	73	14.00	5	7.10	20	33.00		
	6	73	18.50	3	9.70				
	7	73	6.80	8	3.80				
	8	73	20.50	5	24.00				
	9	73	1.30	2	1.90				
	10	73	1.00	7	1.15				

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TRIBUTARY FLOW INFORMATION FOR NEW YORK 11/26/74

LAKE CODE 3637 SWINGING BRIDGE RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
363777	11	72	61.00						
	12	72	53.00						
	1	73	105.00						
	2	73	109.00						
	3	73	30.00						
	4	73	200.00						
	5	73	55.00						
	6	73	70.60	3	42.90				
	7	73	35.00	8	26.60				
	8	73	78.50	5	94.90				
	9	73	18.00	2	20.30				
	10	73	17.00	7	17.50				

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APPENDIX B

PHYSICAL and CHEMICAL DATA

STORET RETRIEVAL DATE 74/11/26

363701
41 35 21.0 074 46 40.0
SWINGING BRIDGE RESERVOIR
36 NEW YORK

11EPALES 2111202
3 0086 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3-N TOTAL MG/L	00665 PHOS-TOT MG/L P	00666 PHOS-DIS MG/L P
72/05/21	14 30	0000	17.3	11.1	72	75	8.80	10K	0.140	0.070	0.053	0.028
	14 30	0005	16.1	9.7		60	6.70	10K	0.230	0.040	0.052	0.017
	14 30	0010	14.3	9.6		75	6.70	10K	0.290	0.070	0.061	0.023
72/07/22	12 50	0000			24	80	9.60	10K	0.040	0.060	0.060	0.026
	12 50	0004	27.9	8.0		75	9.50	10K	0.050	0.150	0.035	0.014
	12 50	0015	21.8	6.2		70	6.60	10K	0.130	0.150	0.021	0.016
	12 50	0033	19.4	6.0		75	6.60	10K	0.120	0.150	0.021	0.018
	12 50	0083	16.3	3.4		85	6.50	10	0.380	0.380	0.076	0.057
72/10/11	15 30	0000			96	77	6.50	10K	0.280	0.240	0.029	0.016
	15 30	0004	17.2	5.8		75	6.60	10K	0.280	0.240	0.031	0.015
	15 30	0015	17.3	5.7		73	6.50	10K	0.280	0.240	0.025	0.015
	15 30	0023	17.2	5.8		75	6.50	10K	0.280	0.240	0.030	0.015
	15 30	0033	17.3	5.6		73	6.50	10K	0.280	0.240	0.028	0.015
	15 30	0043	17.2	5.6		75	6.50	10K	0.280	0.250	0.058	0.016

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DATE FROM TO	TIME OF DAY	DEPTH FEET	32217 CHLRPHYL A UG/L
72/05/21	14 30	0000	28.4J
72/07/22	12 50	0000	83.9J
72/10/11	15 30	0000	8.7J

J VALUE KNOWN TO BE [illegible]

K VALUE KNOWN TO BE LESS THAN INDICATED

STORET RETRIEVAL DATE 74/11/26

363702
41 39 30.0 074 47 04.0
SWINGING BRIDGE RESERVOIR
36 NEW YORK

11EPALES 2111202
3 0012 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00630 NO2&NO3 N-TOTAL MG/L	00610 NH3-N TOTAL MG/L	00665 PHOS-TOT MG/L P	00666 PHOS-DIS MG/L P
72/05/21	15	10 0000	16.9	10.5	50	85	6.70	11	0.390	0.150	0.136	0.078
	15	10 0004	14.8	10.6		90	6.60	10	0.480	0.100	0.147	0.016
72/07/22	13	20 0000			24	90	7.00	11	0.470	0.200	0.150	0.106
	13	20 0004	25.7	3.4		95	7.00	14	0.820	0.110	0.200	0.172
	13	20 0007	22.0	1.7		100	7.00	15	0.800	0.130	0.195	0.165
72/10/11	16	05 0000			42	75	7.20	10K	0.320	0.070	0.056	0.030
	16	05 0004	15.1	10.0		75	7.60	10	0.320	0.060	0.060	0.031
	16	05 0013	10.4	10.7		98	7.05	10	0.500	0.110	0.131	0.085

DATE FROM TO	TIME OF DAY	DEPTH FEET	32217 CHLRPHYL A UG/L
72/05/21	15	10 0000	11.7J
72/07/22	13	20 0000	16.4J
72/10/11	16	05 0000	22.9J

K VALUE KNOWN TO BE LESS THAN INDICATED

J VALUE KNOWN TO BE IN ERROR

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APPENDIX C

TRIBUTARY and WASTEWATER TREATMENT PLANT DATA

STORET RETRIEVAL DATE 74/11/26

3637A1 LS3637A1
41 38 00.0 074 46 30.0
KINNE BROOK
36 7.5 WHITE LAKE
T/SWINGING BRIDG RESERVO
STARLIGHT RD BRDG
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	16 30		0.490	0.700	0.160	0.012	0.071
72/12/02	14 45			0.360	0.066	0.014	0.024
73/01/06	12 45		0.370	0.360	0.044	0.013	0.018
73/02/04	10 40		0.370	0.880	0.198	0.021	0.075
73/03/04	10 30		0.460	0.800	0.336	0.022	0.080
73/04/08	10 30		0.315	2.600	0.120	0.017	0.035
73/04/21	16 15		0.220	1.100	0.097	0.015	0.040
73/05/05	12 40		0.140	0.310	0.008	0.016	0.040
73/05/20	10 30		0.160	0.500	0.062	0.022	0.045
73/06/03	11 30		0.147	2.800	0.078	0.023	0.055
73/07/08	10 30		0.230	1.200	0.044	0.035	0.080
73/08/05	10 30		0.180	1.700	0.110	0.054	0.105
73/09/02	11 00		0.340	2.100	0.108	0.048	0.080
73/10/07	10 30		0.320	1.100	0.170	0.050	0.165

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STORET RETRIEVAL DATE 74/11/26

363781 LS363781
41 39 30.0 074 48 00.0
WHITE LAKE BROOK
36 7.5 WHITE LAKE
T/SWINGING BRIDGE RESERV
BRDG .5 MI E OF MOUNTAIN LAKE
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	16	10	0.299	0.650	0.072	0.015	0.063
72/12/02	14	00	0.970	0.350	0.046	0.013	0.020
73/01/04	12	20	0.340	0.370	0.026	0.016	0.022
73/02/04	13	45	0.410	0.460	0.120	0.027	0.055
73/03/03	13	00	0.490	0.340	0.189	0.029	0.055
73/04/08	09	30	0.280	3.600	0.160	0.015	0.030
73/04/21	15	00	0.168	2.730	0.078	0.011	0.032
73/05/05	11	35	0.130	0.660	0.090	0.020	0.045
73/05/20	11	30	0.052	0.400	0.027	0.020	0.045
73/06/03	10	00	0.168	3.900	0.110	0.015	0.035
73/07/02	16	00	0.120	1.150	0.073	0.028	0.070
73/08/05	11	00	0.020	1.540	0.066	0.044	0.145
73/09/02	10	00	0.115	1.200	0.054	0.032	0.[illegible]
73/10/07	09	30	0.120	0.860	0.190	0.020	0.[illegible]0

STORET RETRIEVAL DATE 74/11/26

3637C1 LS3637C1
41 40 00.0 074 47 00.0
MONGAUP RIVER
36 7.5 WHITE LAKE
I/SWINGING BRIDGE RESERV
ST HWY 178
11EPALES 2111204
4 0000 FEZT DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	0061[illegible] NH[illegible] TO[illegible] MG/[illegible]	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	15 45		0.600	0.600	0.075	0.073	0.138
72/12/02	14 20		0.910	0.380	0.120	0.046	0.072
73/01/06	12 30		0.780	0.480	0.138	0.036	0.056
73/02/04	14 00		0.580	1.320	0.378	0.056	0.190
73/03/03	14 30		0.810	1.600	0.960	0.084	0.165
73/04/08	10 00		0.550	2.500	0.170	0.033	0.065
73/04/21	15 20		0.500	2.500	0.200	0.060	0.105
73/05/05	12 25		0.540	1.540	0.250	0.068	0.110
73/05/20	10 00		0.320	0.630	0.150	0.037	0.080
73/06/03	10 30		0.570	2.600	0.220	0.082	0.130
73/07/08	10 00		0.710	1.470	0.200	0.098	0.150
73/08/05	10 00		0.340	0.930	0.096	0.052	0.125
73/09/02	10 30		1.340	2.310	0.210	0.168	0.210
73/10/07	10 00		0.550	1.260	0.399	0.096	0.135

STORET RETRIEVAL DATE 74/11/26

3637C2 LS3637C2
41 34 00.0 074 47 00.0
MONGAUP RIVER
36 7.5 HIGHLAND LK
T/SWINGING BRDG RESERVOI
BRDG BELO DAM
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	17 05		0.350	0.480	0.105	0.017	0.056
72/12/02	15 15		0.420	0.460	0.084	0.019	0.039
73/01/06	13 30		0.550	0.620	0.149	0.030	0.046
73/02/04	11 30		0.550	0.540	0.190	0.028	0.050
73/03/04	12 15		0.520	0.390	0.189	0.030	0.070
73/04/08	12 30		0.510	2.800	0.240	0.018	0.055
73/04/21	17 30		0.430	0.850	0.180	0.020	0.045
73/05/05	13 10		0.390	1.100	0.147	0.031	0.050
73/05/20	12 20		0.273	0.600	0.157	0.016	0.040
73/06/03	13 00		0.310		0.320	0.032	0.055
73/07/08	12 30		0.231	2.730	0.338	0.047	0.075
73/08/05	12 30		0.440	0.560	0.160	0.046	0.085
73/09/02	12 30		0.336	1.300	0.198	0.030	0.050
73/10/07	12 00		0.320	0.840	0.240	0.016	0.055

STORET RETRIEVAL DATE 74/11/26

3637D1 LS3637D1
41 37 00.0 074 46 30.0
BURNT MEADOW BROOK
36 7.5 HIGHLAND LK
T/SWINGING BRIDGE RESERV
STARLIGHT RD BRDG
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	16 40		0.034	0.310	0.022	0.005K	0.019
72/12/02	14 55		0.064	0.200	0.009	0.006	0.009
73/01/06	13 00		0.060	1.260	0.017	0.005K	0.005K
73/02/04	10 20		0.168	0.520	0.063	0.008	0.020
73/03/04	10 00		0.132	0.190	0.040	0.006	0.010
73/04/08	11 10		0.061	1.800	0.105	0.005	0.010
73/04/21	17 00		0.082	3.990	0.160	0.005K	0.015
73/05/05	12 45		0.040	1.700	0.054	0.006	0.015
73/05/20	11 00		0.021	0.300	0.014	0.005K	0.010
73/06/03	12 00		0.040	3.300	0.079	0.008	0.015
73/07/08	11 00		0.066	1.800	0.115	0.020	0.035
73/08/05	11 00		0.040	0.460	0.033	0.008	0.020
73/09/07	11 35		0.220	0.780	0.050	0.012	0.050
73/10/07	11 00		0.010K	0.540	0.092	0.005K	0.020

K VALUE KNOWN TO BE
LESS THAN INDICATED

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STORET RETRIEVAL DATE 74/11/26

3637E1 LS3637E1
41 35 30.0 074 46 30.0
SACKETT LAKE BROOK
36 7.5 HIGHLAND LK
T/SWINGING BRDG RESERVOI
STARLIGHT RD BRDG BELO SACKETT LK STP
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	16 45		0.076	0.630	0.063	0.140	0.200
72/12/02	15 00		0.180	0.320	0.04A	0.028	0.04A
73/01/06	13 50		0.250	0.300	0.027	0.027	0.045
73/02/04	10 00		0.200	0.690	0.098	0.028	0.055
73/03/04	11 30		0.520	0.520	0.176	0.052	0.095
73/04/08	12 00		0.120	3.360	0.126	0.019	0.035
73/04/21	17 30		0.025	2.000	0.04A	0.069	0.120
73/05/05	12 55		0.065	0.880	0.064	0.080	0.125
73/05/20	12 00		0.015	0.560	0.060	0.026	0.055
73/06/03	12 20		0.052	2.500	0.062	0.067	0.105
73/07/08	12 00		0.115	1.540	0.115	0.110	0.185
73/08/05	11 45		0.020	0.560	0.026	0.098	0.155
73/09/02	12 00		0.200	2.940	0.100	0.092	0.230
73/10/07	11 30		0.060	1.200	0.198	0.056	0.115

STORET RETRIEVAL DATE 74/11/26

3637E2 LS3637E2
41 37 30.0 074 37 00.0
SACKETT LAKE BROOK
36 7.5 HARTWOOD
T/SWINGING BRDG RESERVOI
BRDG ABOVE SACKETT LAKE STP
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04			0.060	0.520	0.036	0.013	0.075
72/12/02	15 30		0.138	0.460	0.115	0.007	0.022
73/01/06	13 45		0.231	0.440	0.050	0.005K	0.020
73/02/04	12 30		0.240	0.325	0.042	0.00A	0.025
73/03/04	13 15		0.336	0.400	0.040	0.010	0.025
73/04/08	14 00		0.170	2.200	0.080	0.005K	0.025
73/04/21	18 00		0.042	0.960	0.037	0.005K	0.025
73/05/05	13 30		0.060	1.320	0.060	0.009	0.030
73/05/20	13 00		0.032	0.600	0.076	0.00A	0.025
73/06/03	14 00		0.058	4.000	0.110	0.012	0.030
73/07/08	13 00		0.040	1.570	0.070	0.024	0.045
73/08/05	13 30		0.012	0.480	0.023	0.009	0.030
73/09/02	13 00		0.105	2.350	0.072	0.019	0.070
73/10/07	13 00		0.017	0.520	0.115	0.015	0.025

K VALUE KNOWN TO BE
LESS THAN INDICATED

30

STORET RETRIEVAL DATE 74/11/26

3637F1 L53637F1
41 43 00.0 074 47 30.0
WEST BRANCH MONGAUP RIVER
36 7.5 WHITE LAKE
T/SWINGING BRDG RESERVOI
BLUM RD BRDG BELO SWAN LAKE STP
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	15	10	0.247	0.520	0.044	0.013	0.064
72/12/02	12	10	0.380	0.270	0.018	0.007	0.036
73/01/06	10	40	0.570	0.400	0.048	0.012	0.030
73/02/03	12	15	0.450	0.490	0.105	0.015	0.040
73/03/03	11	55	0.630	0.400	0.230	0.021	0.045
73/04/07	13	05	0.270	3.080	0.110	0.005K	0.040
73/04/21	13	15	0.300	1.320	0.105	0.030	0.070
73/05/05	10	30	0.270	0.420	0.063	0.023	0.045
73/05/19	13	45	0.126	0.980	0.079	0.018	0.055
73/06/02	13	30	0.310	0.750	0.069	0.050	0.085
73/07/07	14	00	0.890	0.600	0.087	0.070	0.105
73/08/05	13	20	0.115	0.705	0.048	0.015	0.075
73/09/02	13	30	1.160	1.380	0.126	0.132	0.175
73/10/07	14	25	0.360	1.100	0.065	0.056	0.085

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 74/11/26

3637F2 LS3637F2
41 45 00.0 074 47 00.0
WEST BRANCH MONGAUP RIVER
36 7.5 WHITE LAKE
T/SWINGING ARDG RESERVOI
HWY 55 BRDG ABOV SWAN LAKE STP
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04			0.070		0.044	0.005K	0.042
72/12/02	12 00		0.830	0.310	0.052	0.017	0.024
73/01/06	10 25		0.410	0.320	0.027	0.007	0.025
73/02/03			0.370	0.660	0.115	0.008	0.040
73/04/07	12 45		0.180	0.540	0.052	0.005K	0.025
73/04/21	12 55		0.082	1.380	0.034	0.005K	0.025
73/05/05	10 15		0.036	0.370	0.033	0.005K	0.025
73/05/19	13 30		0.018	1.080	0.048	0.005K	0.030
73/06/02	13 00		0.066	3.780	0.140	0.009	0.035
73/07/07	13 40		0.330	2.200	0.093	0.050	0.055
73/08/05	12 50		0.010K	0.720	0.025	0.005K	0.055
73/09/02	12 55		0.330	1.700	0.120	0.031	0.060
73/10/07	14 00		0.084	0.660	0.037	0.008	0.035

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 74/11/26

3637G1 LS3637G1
41 41 30.0 074 49 50.0
WHITE LAKE BROOK
36 7.5 WHITE LAKE
T/SWINGING BRDG RESERVOI
ST HWY 55 ABOVE KAUNEOGA LAKE STP
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	14	30	0.088	0.290	0.085	0.009	0.022
72/12/02	12	45		0.480	0.014	0.005K	0.012
73/01/06	10	40	0.084	0.190	0.018	0.005K	0.010
73/02/03	13	25	0.115	0.270	0.021	0.005K	0.015
73/03/03	12	00	0.069	0.500	0.240	0.006	0.010
73/04/07	13	30	0.034	2.200	0.050	0.005K	0.015
73/04/21	13	35	0.025	1.150	0.030	0.005K	0.015
73/05/05	10	40	0.025	0.280	0.019	0.005K	0.010
73/05/19	15	10	0.022	0.340	0.013	0.005K	0.015
73/06/02	14	00	0.044	1.890	0.082	0.005K	0.025
73/07/07	14	20	0.031	1.380	0.040	0.013	0.015
73/08/04	13	40	0.011	0.330	0.024	0.005K	0.015
73/09/01	14	15	0.024	0.300	0.018	0.005K	0.015
73/10/07	14	50	0.026	0.380	0.025	0.005K	0.010

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 74/11/26

3637G2 LS3637G2
41 40 30.0 074 49 00.0
WHITE LAKE BROOK
36 7.5 WHITE LAKE
T/SWINGING BRDG RESERVOI
ST HWY 17 BRDG BELO KAUNEOGA LAKE STP
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	15 55		0.148	0.460	0.060	0.062	0.091
72/12/02	13 45		0.140	0.250	0.025	0.016	0.031
73/01/06	12 05		0.126	0.250	0.040	0.017	0.030
73/02/03	13 35		0.168	0.330	0.072	0.019	0.040
73/03/03	12 50		0.220	0.660	0.220	0.042	0.070
73/04/21	14 40		0.073	2.000	0.126	0.038	0.065
73/05/05	11 25		0.110	0.540	0.043	0.040	0.060
73/05/19	16 00		0.063	0.500	0.087	0.017	0.035
73/06/02	16 00		0.100	7.200	0.220	0.042	0.075
73/07/07	15 30		0.110	1.150	0.260	0.078	0.115
73/08/04	15 30		0.048	0.720	0.138	0.052	0.075
73/09/01	16 00		0.740	1.200	0.470	0.180	0.230
73/10/07	09 00		0.231	0.940	0.231	0.063	0.095

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STORET RETRIEVAL DATE 74/11/26

3637H1 LS3637H1
41 47 30.0 074 44 00.0
MIDDLE BRANCH MONGAUP RIVER
36 7.5 LIBERTY EAST
T/SWINGING BRDG RESERVOI
ST HWY 52 ABOVE LIBERTY STP
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	11 15		0.410	0.300	0.033	0.019	0.040
72/12/02	10 10		0.490	0.210	0.048	0.013	0.028
73/01/06	09 30		0.570	0.290	0.048	0.012	0.025
73/02/03	10 45		0.350	0.320	0.056	0.018	0.055
73/03/03	10 40		0.660	0.635	0.138	0.020	0.055
73/04/07	09 40		0.380	0.310	0.039	0.005K	0.015
73/04/21	10 00		0.330	1.320	0.048	0.006	0.020
73/05/05	09 05		0.330	0.110	0.012	0.009	0.030
73/05/19	10 20		0.253	2.300	0.102	0.008	0.025
73/06/02	07 00		0.230	1.300	0.092	0.010	0.030
73/07/07	10 20		0.370	0.375	0.126	0.020	0.025
73/08/04	10 00		0.378	0.440	0.060	0.017	0.035
73/09/01	10 25		0.399	0.600	0.011	0.023	
73/10/06	10 25		0.336	0.620	0.029	0.017	0.050

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 74/11/26

3637H2 LS3637H2
41 46 30.0 074 44 30.0
MIDDLE BRANCH MONGAUP RIVER
36 7.5 LIBERTY EAST
T/SWINGING BRDG RESERVOI
BRDG IN FERNDALE BELO STP
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
72/11/04	11 00		0.600	1.380	0.860	0.357	0.480
72/12/02	10 00		0.577	1.000	0.630	0.176	0.240
73/01/06	09 20		0.610	1.200	0.690	0.210	0.260
73/02/03	10 30		0.410	0.810	0.180	0.044	0.105
73/03/03	10 25		0.630	1.680	1.260	0.350	0.440
73/04/07	09 15		0.500	3.500	0.380	0.075	0.120
73/04/21	09 30		0.410	2.600	1.200	0.300	0.400
73/05/05	09 00		0.510	1.320	0.840	0.273	0.360
73/05/19	10 00		0.399	1.050	0.550	0.105	0.180
73/06/02	07 35		0.350	2.600	0.760	0.200	0.300
73/07/07	10 30		0.430	3.600	1.500	0.280	0.560
73/08/04	09 30		0.500	1.150	0.550	0.140	0.210
73/09/01	10 00		0.550	3.780	2.587	0.670	0.830
73/10/06	10 00		0.590	4.600	2.250	0.640	0.800

STORET RETRIEVAL DATE 74/11/27

363751 TF363751 P004000
41 41 30.0 074 50 00.0
KAUNEONGA LAKE (BETHEL)
36 7.5 WHITE LAKE
T/SWINGING BRDG RES
WHT LAKE BROOK/MTN LAKE/WHT LAKE BROOK
11EPALES 2141204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
72/12/29	14 00		1.700	2.350	1.370	0.787	0.920	0.300	0.250
73/02/05	15 00		3.100	1.500	0.860	0.710	0.960	0.289	0.200
73/03/13	11 00		2.500	2.500	1.040	0.730	0.810	0.238	0.150

STORET RETRIEVAL DATE 74/11/27

363752 TF363752 P005000
41 36 30.0 074 45 00.0
SACKETT LAKE (THOMPSON)
36 7.5 HIGHLAND LK
T/SWINGING BRDG RES
SACKETT LK BR/BIRCHWOOD P/CRESCENT L/WIC
11EPALES 2141204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/01/26	09 00								
CP(T)-			0.770	1.100	0.290	0.310	0.450		
73/01/26	18 00								
73/02/23	09 00								
CP(T)-			1.260	1.200	0.490	0.170	0.320		0.100
73/02/23	18 00								
73/03/21	09 00								
CP(T)-			0.780	0.155	0.155	0.160	0.190		
73/03/21	16 00								
73/05/15	09 00								
CP(T)-			0.590	1.200	0.175	0.175	0.390		
73/05/15	15 00								
73/08/27	09 30								
CP(T)-			2.100	5.600	2.280	1.500	1.890		
73/08/27	15 30								
73/09/14	10 00								
CP(T)-			1.180	1.700	0.370	0.520	0.680		
73/09/14	16 00								
73/10/18	08 30								
CP(T)-			0.800	1.500	0.270	0.300	0.820	0.200	0.200
73/10/18	15 30								
73/11/08	09 00								
CP(T)-			0.660	1.100	0.250	0.190	0.560	0.200	0.200
73/11/08	16 00								
73/12/06	09 00								
CP(T)-			0.920	1.500	0.150	0.260	0.280	0.200	0.200
73/12/06	16 00								
74/01/31	09 00								
CP(T)-			0.680	0.900	0.220	0.190	0.375	0.200	0.200
74/01/31	16 00								
74/02/15	08 30								
CP(T)-			0.760	3.050	0.970	0.450	0.645	0.200	0.200
74/02/15	15 30								

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STORET RETRIEVAL DATE 74/11/27

363753 TF363753 P004300
41 43 00.0 074 44 00.0
LIBERTY
36 7.5 LIBERTY EAST
T/SWINGING BRDG RES
MIDDLE BRANCH
11EPALES 2141204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/01/02	08 00								
CP(T)-			0.520	6.000	1.400	1.200	1.500	1.880	1.240
73/01/02	14 00								
73/01/31	08 00								
CP(T)-			0.175	23.000	8.300	3.200	3.900	0.615	0.829
73/01/31	14 00								
73/02/28	08 00								
CP(T)-			0.145	18.900	9.400	3.800	4.800	0.676	0.968
73/02/28	15 00								
73/04/02	08 00								
CP(T)-			1.160	8.200	2.900	0.880	1.750	3.000	1.140
73/04/02	14 00								
73/05/01	08 00								
CP(T)-			0.592	17.600	8.550	3.150	4.200	1.000	1.390
73/05/01	14 00								
73/07/05	08 00								
CP(T)-			0.720	10.500	5.100	1.890	2.600	0.835	1.400
73/07/05	13 00								
73/08/01	08 00								
CP(T)-			0.090	23.100	7.600	3.200	4.900	0.646	1.680
73/08/01	14 00								
73/09/06	08 00								
CP(T)-			0.231	19.300		3.340		1.200	1.400
73/09/06	14 00								
73/10/31	11 00		0.360	19.000	7.000	2.310	3.600	0.995	0.880
73/12/03	14 00		0.320	17.000	7.600	3.200	4.100	1.090	1.010
74/01/03	11 15		0.480	22.000	6.720	2.200	4.700	1.200	1.080
74/04/02	13 00		0.490	13.000	3.900	1.700	2.700	2.770	1.940
74/05/01	12 30		0.200	20.000	7.500	2.400	3.600	2.600	3.580

STORET RETRIEVAL DATE 74/11/27

363754 TF363754 P000375
41 40 00.0 074 40 00.0
KIAMESHA (THOMPSON)
36 7.5 MONTICELLO
T/SWINGING BRDG RES
KIAMESHA BROOK
11EPALES 2141204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/01/19	09 00								
CP(T)-			0.200	12.000	4.300	0.985	2.200	0.177	0.425
73/01/19	18 00								
73/02/20	08 00								
CP(T)-			0.550	16.800	7.980	1.160	2.750	0.216	0.515
73/02/20	17 00								
73/03/26	09 00		1.260	3.450	1.890	0.260	0.610	0.209	0.400
73/04/12	09 00								
CP(T)-			0.250	9.300	3.700	0.750	2.200	0.736	0.880
73/04/12	16 00								
73/07/27	08 30								
CP(T)-			0.320	15.500	6.900	0.987	2.300	0.487	0.961
73/07/27	15 30								
73/08/31	08 00								
CP(T)-				18.800	9.800	2.540	3.800	0.330	1.130
73/08/31	15 00								
73/09/28	11 00								
CP(T)-			0.100	21.000	9.500	4.500	5.800	0.350	0.987
73/09/28	16 00								
73/10/25	08 00								
CP(T)-			0.029	15.000	5.900	3.100	4.000	0.249	0.581
73/10/25	16 00								
73/11/15	08 00								
CP(T)-			0.110	10.500	5.000	2.000	2.900	0.175	0.387
73/11/15	15 00								
73/12/29	08 00								
CP(T)-			0.320	12.000	3.500	1.000	4.400	0.741	0.817
73/12/29	15 00								
74/01/24	08 00								
CP(T)-			0.360	5.400	1.440	0.730	1.700	0.182	0.698
74/01/24	15 00								
74/02/26	08 00								
CP(T)-			0.680	6.200	2.200	1.750	3.300	0.048	0.339
74/02/26	15 00								

STORET RETRIEVAL DATE 74/11/27

363755 AS363755 P000150
41 36 00.0 074 40 30.0
MELODY LAKE (THOMPSON)
36 7.5 HARTWOOD
T/SWINGING BRDG RES
TURNER BROOK
11EPALES 2141204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P	50051 FLOW RATE INST MGD	50053 CONDUIT FLOW-MGD MONTHLY
73/01/19	09 00								
CP(T)-			0.600	22.000	10.400	2.600	4.600	0.019	0.006
73/01/19	18 00								
73/03/29	09 00								
CP(T)-			0.460	13.200	4.400	1.890	2.500	0.007	
73/03/29	16 00								
73/05/18	09 00								
CP(T)-			0.450	11.500	5.250	1.045	2.100	0.014	0.004
73/05/18	16 00								
73/06/14	09 00								
CP(T)-			1.050	19.000	8.950	2.400	3.550	0.003	0.005
73/06/14	15 00								
73/07/26	09 30								
CP(T)-			15.400	2.700	0.280	3.600	5.000	0.011	0.013
73/07/26	15 30								
73/08/28	09 30								
CP(T)-				4.700	0.570	4.750	5.900	0.002	0.002
73/08/28	13 30								
73/09/28	15 00		13.200	15.500	5.300	3.700	4.800	0.021	0.036
73/10/26	09 00								
CP(T)-			5.100	14.000	2.800	4.100	5.230	0.002	0.012
73/10/26	15 00								
73/11/15	09 30								
CP(T)-			0.880	35.000	19.000	4.100	6.450	0.001	0.001
73/11/15	15 30								
73/12/12	09 00								
CP(T)-			1.540	9.700	0.700	0.840	1.900	0.003	0.021
73/12/12	16 00								
74/01/17	08 30								
CP(T)-			0.600	11.000	4.300	1.100	2.400	0.040	0.069
74/01/17	15 30								
74/02/28	08 30								
CP(T)-			0.560	8.800	3.100	1.200	4.500	0.003	0.011
74/02/28	15 30								

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